Temperature rating of portfolios, indexes, & companies

Consultation Webinar

Online webinar: April 30, 2020

Nate Aden, Nico Fettes, Chris Weber, Eoin White

SCIENCE BASED TARGETS

DRIVING AMBITIOUS CORPORATE CLIMATE ACTION

PARTNER ORGANIZATIONS

CDP DISCLOSURE INSIGHT ACTION

UN GLOBAL COMPACT

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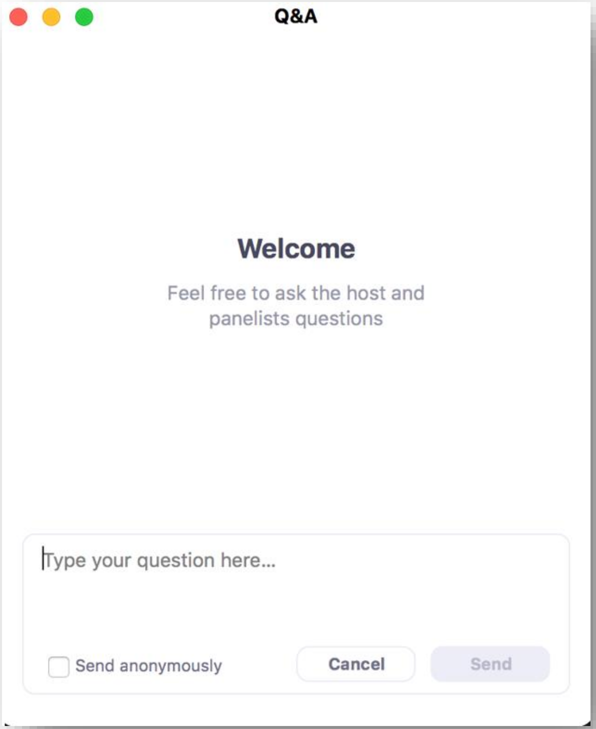
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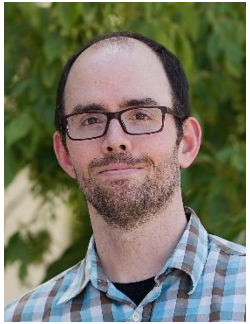
Temperature Scoring I Today's Speakers



Nate Aden
Senior Fellow
naden@wri.org
World Resources Institute



Eoin White
Target Validation Analyst
Eoin.White@cdp.net
CDP



Chris Weber
Global Climate & Energy Lead Scientist
chris.weber@wwf.org
WWF



Nico Fettes
Head of Climetrics
Nico.Fettes@cdp.net
CDP

Temperature Scoring I Agenda

AGENDA ITEM	PRESENTED / MODERATED BY	TIME ALLOCATION
SBTi framework for financial institutions	**Nate Aden**	**15 minutes**
SBTi temperature scoring methodology	Eoin White/Chris Weber/Nico Fettes	30 minutes
Method refinement and stakeholder consultation process	Eoin White	15 minutes
Next steps and opportunities for participation	Nate Aden	10 minutes
Questions and discussion	---	20 minutes

Science-based targets for financial institutions

In 2018, the SBTi launched a project to help financial institutions align their lending and investment portfolios with the ambition of the Paris Agreement.

The project audience includes universal banks, pension funds, insurance companies and public financial institutions.



SCIENCE BASED TARGETS

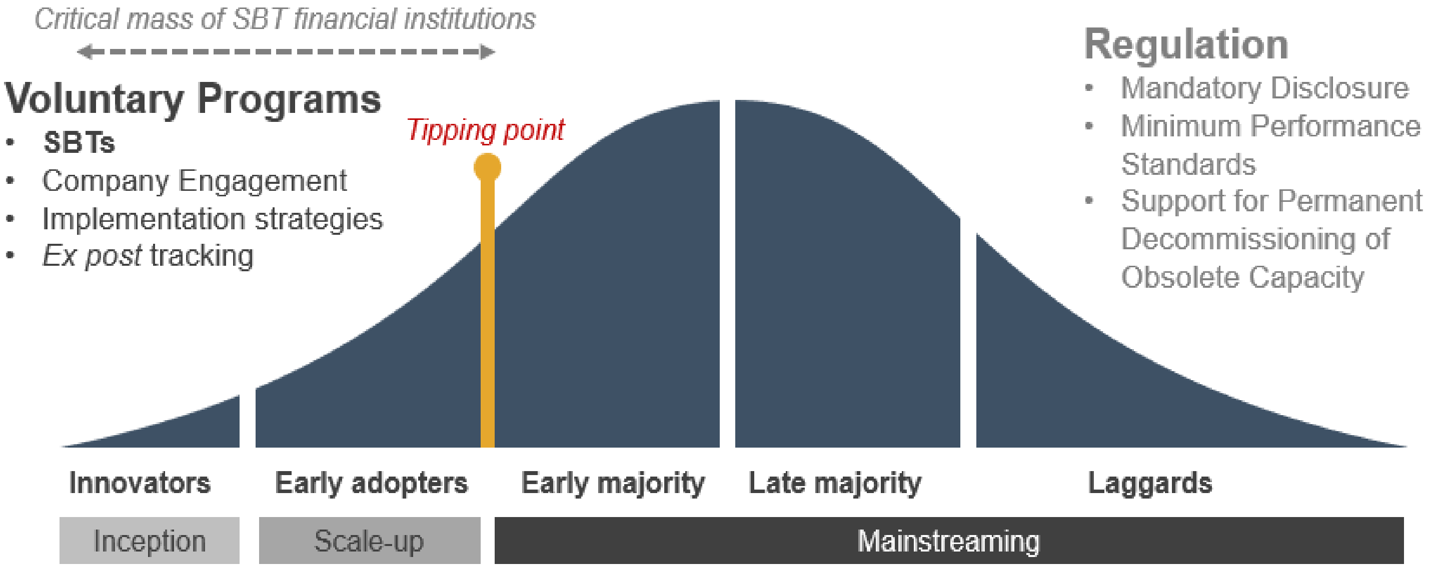
DRIVING AMBITIOUS CORPORATE CLIMATE ACTION

SBTi-Finance Framework I Project partners and roles

Managing Partner

Technical Partner

SBTi-Finance Framework I Tipping point theory of change

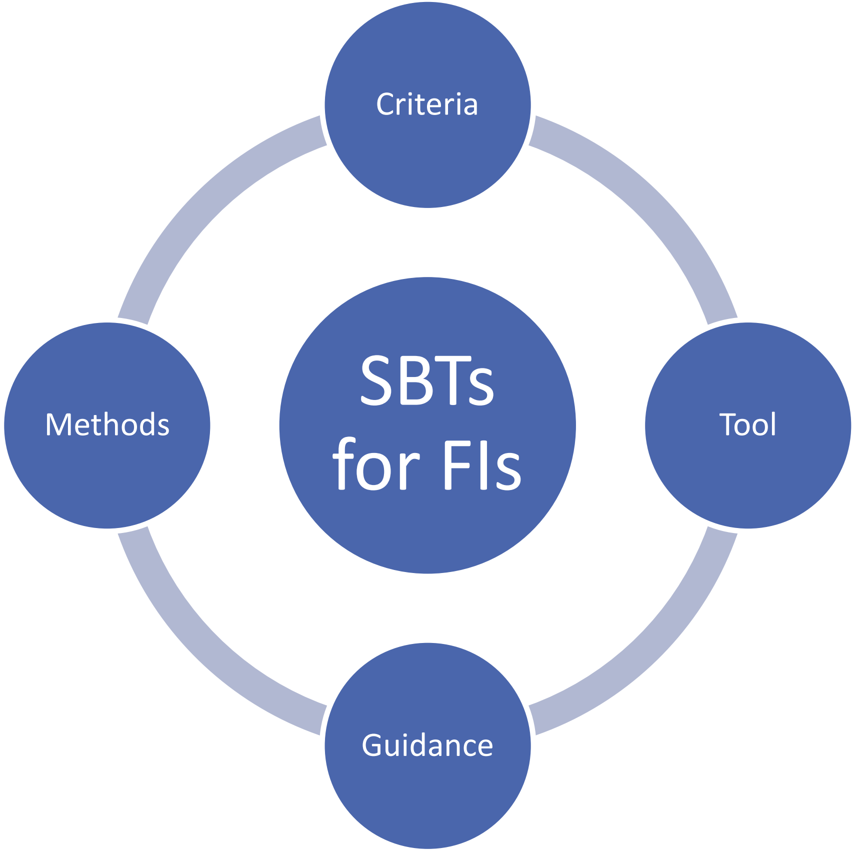


By requiring economic actors to set targets not only for their direct emissions, but for all emissions across their value chain over which they have influence (i.e. scope 2 and 3), the **SBTi seeks to align all relevant economic actors across a value chain behind a common goal and therefore create incentives and eliminate barriers for broader Paris-aligned systemic transformation.**

SBTi-Finance Framework I Scope

Included	Outside of Current Scope
Scope 1 and 2 science-based target methods, criteria, and guidance	Impact assessment (pending data and evidence availability)
Scope 3 target methods, criteria, and guidance (‘how much’)	Additionality (quantification or attribution without sufficient evidence)
Disclosure of implementation strategy	Ex-post tracking
Flexibility on actions to achieve targets	Implementation requirements (‘how’)
Engagement strategies (via Portfolio Coverage & Temperature Scoring)	Leakage remediation
	Evaluation of strategies’ cost effectiveness

SBTi-Finance Framework I Framework components



SBTi-Finance Framework I Project milestones

Apr 2019: Launch of **methods** road-testing process.

Apr-Oct 2019:

Gather and share feedback on draft **methods** through road-testing process

Dec – Apr 2020:

Develop draft **criteria** and conduct consultations at EAG/SAG workshops

Apr - Aug 2020:

Finalize **guidance**, **criteria**, **methods**, and target-setting **tool**

We are here

Sept 2020:

Launch V1 of **framework**

SBTi-Finance Framework I Mapping methods to asset classes

Asset Class	Method	Description
Real Estate	Sector Decarbonization Approach (SDA)	Emissions-based physical intensity targets are set for non-residential buildings' intensity and total GHG emissions.
Mortgages	SDA	Emissions-based physical intensity targets are set for residential buildings' intensity and total GHG emissions.
Electricity Generation Project Finance	SDA	Emissions-based physical intensity targets are set for electricity generation projects' intensity and total GHG emissions.
Corporate Instruments (equity, bonds, loans)	SDA	Emissions-based physical intensity targets are set at sector level within the portfolio for sector where sectoral decarbonization approaches are available.
	PACTA	Sectors are assessed at individual business activity level for select activities.
	SBT Portfolio Coverage	Financial institutions engage a portion of their investees (in monetary or GHG emissions terms) to have their own science-based targets such that they will reach 100% coverage by 2050.
	Temperature Rating	Financial institutions apply temperature rating method to come up with base- and target-year temperatures (e.g., 2.6°C in 2019 and 1.7°C in 2025).

Background to Temperature Scoring

Temperature Scoring I Background

1. Temperature Scoring Methodology: Protocols to translate public targets to scores	2. Applications Solutions built on top of the open source framework

Targets

Scientific Methodology
Converts targets into temperature ratings

Companies

Target Protocol
Converts target scores to company scores

Portfolios

Portfolio Protocol
Aggregates company scores to portfolio scores

Open source, public methodology
Data agnostic

SBTi
Financial Institutions
Methodology

Data and solutions
Insights for investors and corporates

Corporate and investor applications

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Temperature Scoring I Background

The launch of the IPCC 1.5C report led the SBTi to classify all targets against long term temperature goals to determine relative ambition of approved targets



The SBTi's Foundations of Science Based Target Setting. This document describes the SBTi's framework for developing target-setting methods that are in line with science and for evaluating emissions scenarios associated with these methods.

The SBTi have determined the GHG emission pathways that are aligned to three specific temperature pathways: 2C, well-below 2C, 1.5C



Temperature Scoring I Background

The SBTi's target validation protocol defines the ambition ranges for absolute and intensity targets based on the absolute emissions contraction and sectors decarbonisation approaches.


SCIENCE BASED TARGETS

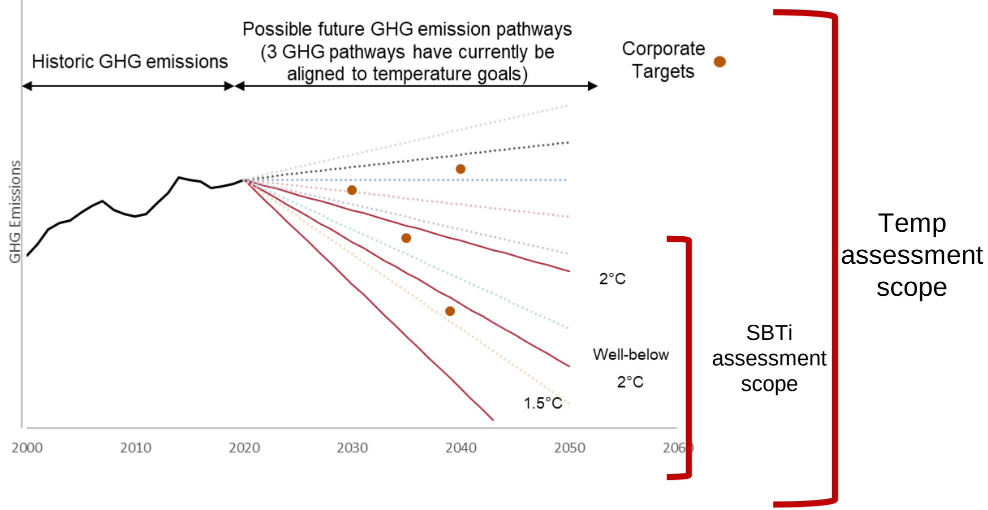
Target Validation Protocol

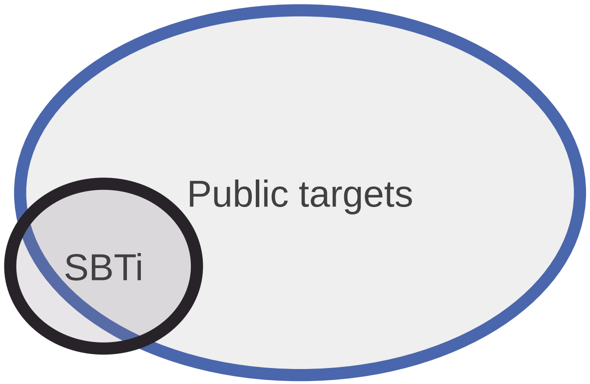
Long-term temperature goal	Ambition range (global emissions pathway)	Ambition range (sector emissions pathway)
2°C Approx. 50% chance of limiting warming in 2100 to below 2°C	**1.23% ≤ X < 2.5%** annual linear reduction rate over target period	SDA 2DS pathway ≤ X < SDA B2DS pathway
Well below 2°C Approx. 66% chance of limiting peak warming between present and 2100 to below 2°C	**2.5% ≤ X < 4.2 %** annual linear reduction rate over target period	X ≥ SDA B2DS pathway
1.5°C Approx. 50% chance of limiting peak warming between present and 2100 to below 1.5°C	**X ≥ 4.2 %** annual linear reduction rate over target period	N/A

Temperature Scoring I Background

- The SBTi have determined the GHG pathways that are aligned to three specific temperature pathways: 2°C, well-below 2°C, 1.5°C;
- Temperature scoring will assess and rate corporate ambition against a wider range of temperature outcomes (1.5–4°C) . e.g. Company A’s GHG emission reduction target of X% reduction in absolute emissions by 2025 implies their ambition is aligned to a Y°C world.

Temperature scoring protocol will define how a range of GHG pathways align to long term temperature pathways





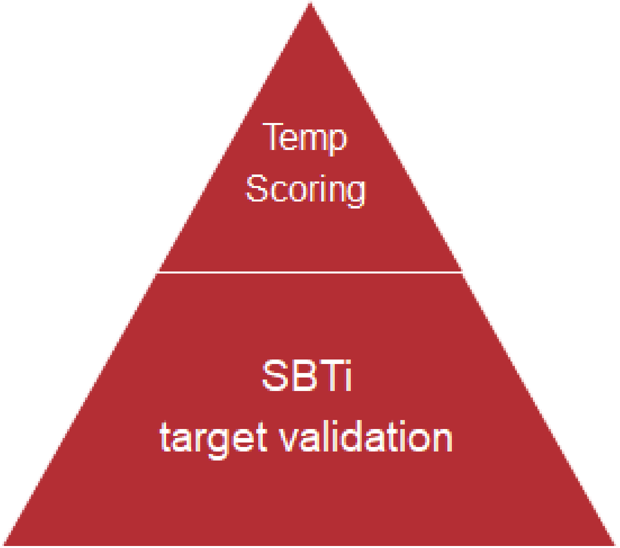
Temperature Scoring I Background

- Assessing the ambition of corporate targets is complex: expressed with different units, over multiple timeframes covering various types of scopes
  - Scope Coverage: scope 1, scope 2, scope 1+2, scope 3, scope 1+2+3
  - Absolute/Intensity targets: many types of activity indicators e.g. per MWh, per revenue, per tonne of product
  - Timeframes: targets can be set anywhere from 2020-2050

- **Translate:** the goal of a temperature rating is to translate targets into a single common and intuitive metric that is linked to the long-term temperature outcomes associated with the ambition of the target.

Example targets	Translated temperature scores
30% absolute reduction by 2025	1.8°C
4% year-on-year reduction by 2030	1.9°C
50% reduction per unit of revenue by 2030	2.1°C
25% reduction per MWh by 2025	3.1°C

Temperature Scoring I Background



	Type of assessment	Protocol of assessment	Output
Temp Scoring	Temperature rating based on target ambition	In development	Temperature rating & target coverage (individually or in aggregate)
SBTi target validation	Qualitative and quantitative assessment of targets to determine compliance with SBTi criteria and alignment of ambition to Paris goals	SBTi criteria & target validation protocol	Target approval & temperature outcome (1.5°C, WB2C, 2°C)

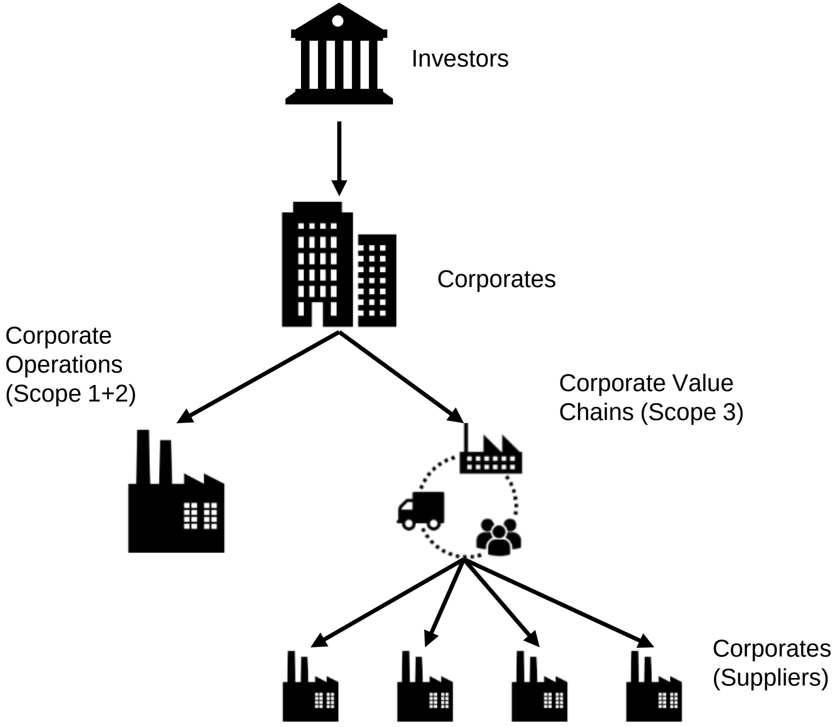
Temperature Scoring I Background

The temperature scoring standard enables all actors to use common, intuitive, and consistent metric to rate ambition at various levels.

1. **Investor:** Investors use temperature scores to assess status and ambition of companies and build Paris-aligned portfolios

2. **Corporate:** Corporates use temperature scores to classify ambition and highlight leadership. Corporates are scored on both their operational scope 1+2 ambition and value chain, scope 3 ambition

3. **Value Chain**: Corporates can assess the status of their value chain by rating the ambition of their key suppliers

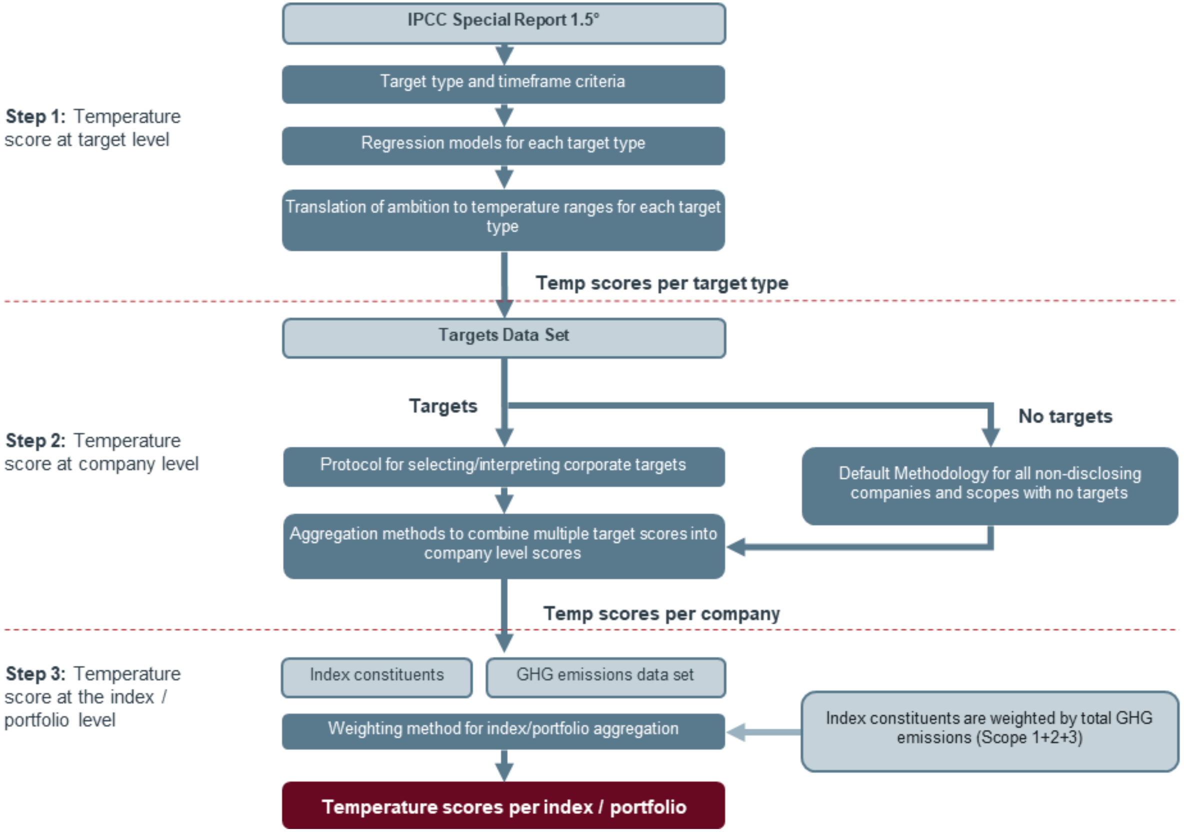


Methodological Overview

Methodology I Three Step Process

Temperature scoring process

1. The protocol for interpreting corporate targets is applied to the cleaned target data.
2. Target scores are aggregated to produce company level scores for scopes and timeframes
3. Company scores are weighted and aggregated to produce portfolio level scores



Methodology I Step 1 Target Protocol

Target level

Methodology converts targets into temperature ratings

1. Scoring Targets

Assess which types of corporate GHG targets (absolute and GHG intensity reductions) can be matched to scenario variables

Type of target	Scenario benchmark
Absolute GHG targets	Global GHG emissions
Economic intensity targets	Global GHG/GDP
CO_2 intensity of electricity	Global CO_2/MWh
etc	

2. Scoring non-disclosers

Companies without any relevant, publicly disclosed targets, or without targets covering a particular GHG emissions scope (e.g. scope 3), are still assigned a temperature score ("default temperature score")

Methodology I Step 1 Target Protocol

Method tests a hypothesis of a linear relationship between the change (slope) in common scenario metrics (e.g., absolute emissions; emissions/GDP) over specific timeframes relevant to corporate target setting horizons (e.g., 2020-2035) and the resulting global warming in 2100
-> Builds on previous work by IPCC and SBTi members

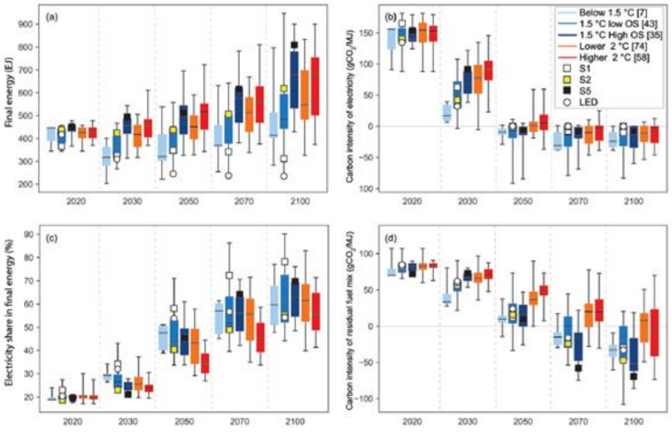


Figure: Scenario variables in different timeframes by temperature outcome.
Source: IPCC SR1.5, Chapter 2

Regression models were developed for each unique combination of:

- key scenario variables/benchmarks; 6
- unique scenario subset (filtering by peak year, max CDR); 56
- key time horizons relevant to corporate targets, (5 to 30 years); 6

=> 56 x 6 x 6 unique regression models

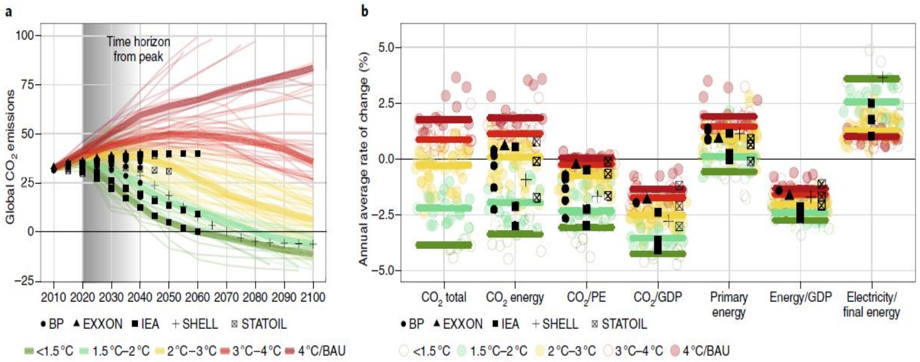


Figure: Range of slopes for common scenario variables/benchmarks.
Source: Weber et al. (2018) ***Nature Climate Change***.

Methodology I Step 1 Target Protocol

Final scenario set and time horizon chosen by combination of:

- goodness of fit (adj R^2)
- alignment to SBTi's precautionary view of overshoot/CDR (max 10 Gt/yr)

Results:

- total 133 scenarios from SR1.5 ensemble
- Adj. R2 ranges from
    - 0.71-0.85 over 15 years
    - 0.84-0.93 over 30 years

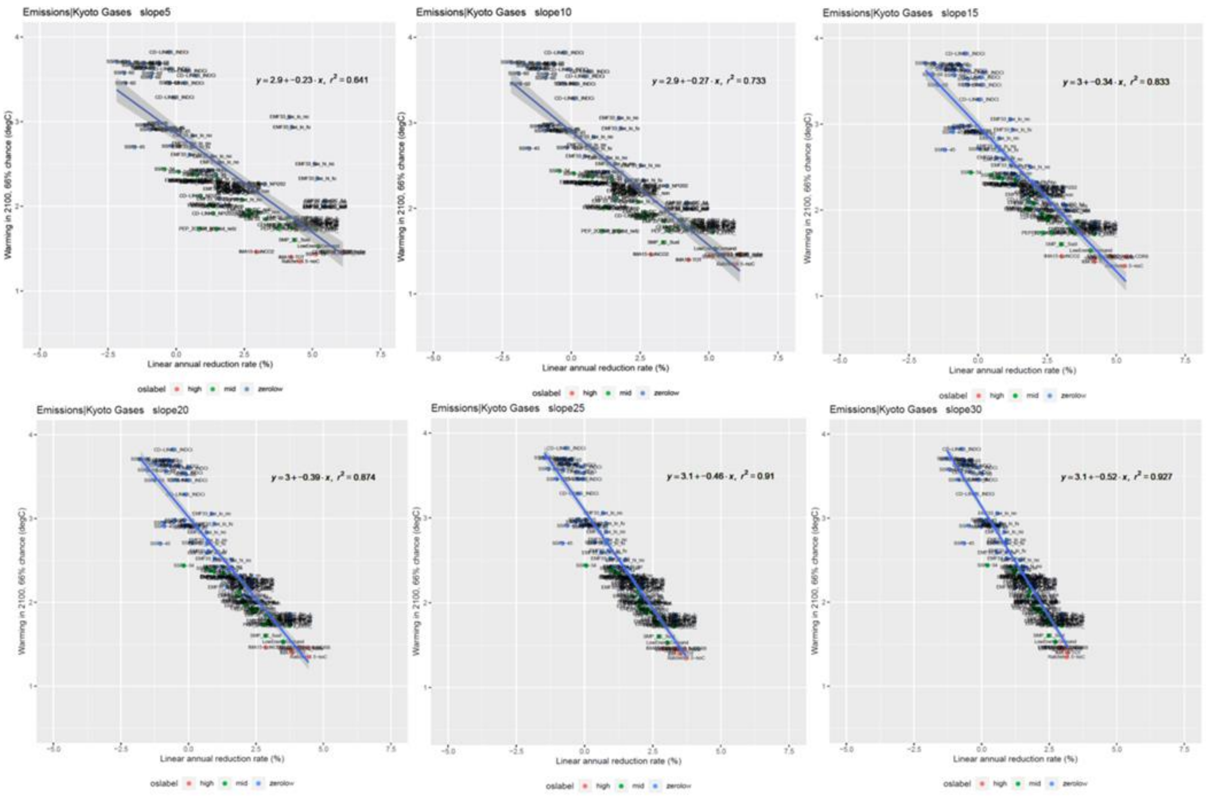


Figure: Regression results for chosen scenario set, 5-30 years, for global GHGs

Methodology I Step 2 Target Protocol

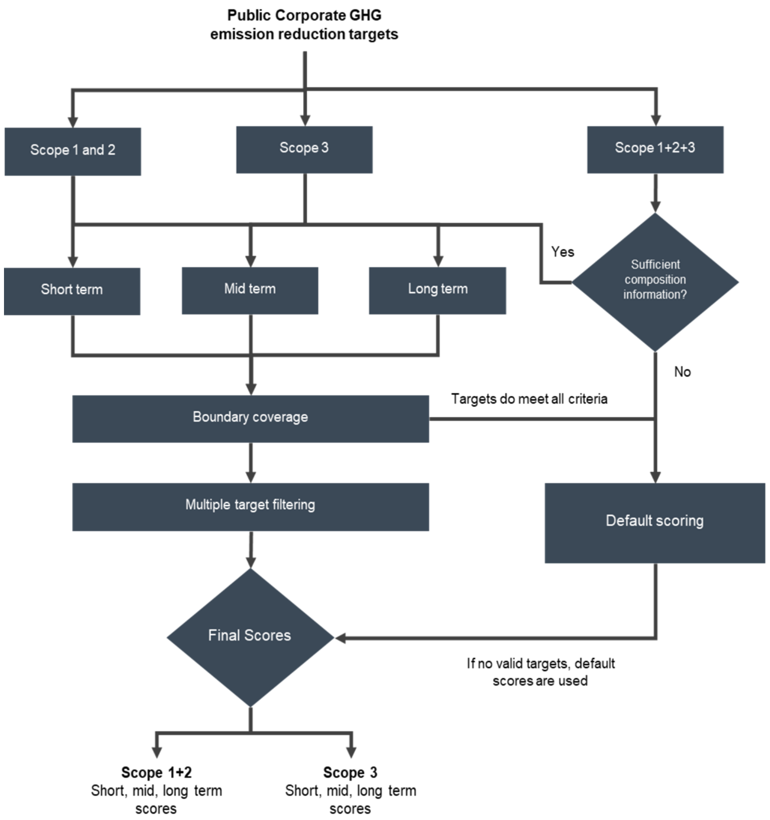
Five key quality criteria to assess the validity of targets

Step	Description
1. Target Types	Defines which targets can be scored, e.g. absolute targets, intensity targets. Electricity procurement, net zero, engagement targets are not scored
2. Scope Coverage	Scope 1+2 and scope 3 targets (if scope 3> 40% of total) are scored. These scored will be aggregated to produce a scope 1+2+3 If a scope is not covered by targets, a default score will be used
3. Boundary Coverage	Criteria based on two approaches: setting a minimum coverage at 95% (scope 1 and 2) and 67% (scope 3), or using a weighted approach e.g. emissions not covered in a scope are scored using default approaches
4. Target timeframe	Targets can be scored over short (2021-2024), mid (2025-2035) and long (2035-2050) timeframes
5. Progress	The first version will focus exclusively on forward looking targets. Ambition is measured from base year to target year. Targets completed by the reporting year are not valid

Methodology I Step 2 Company Protocol

Step by Step guide

- Identify valid target types
- Classify companies by scope
- Classify companies by timeframe
- Apply boundary coverage criteria
- Multiple target filtering
  - Select target with highest boundary coverage
  - Select later target years
  - Absolute targets prioritized



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Methodology I Step 2 Company Protocol

Outputs at a company level: produce one temperature score for each scope and applicable timeframe.

	Short-term 2021-2024	Mid-term 2025-2035	Long-term 2035-2050
Scope 1+2 GHG: 450,000t	No target/ default score: **3.2°C**	Yes **1.8°C**	Yes **1.9°C**
Scope 3 GHG: 2,100,000t	No target/ default score: **3.2°C**	No target/ default score: **3.2°C**	No target/ default score: **3.2°C**
Scope 1+2+3 GHG: 2,550,000t	No target/ default score: **3.2°C**	GHG weighting applied to produce a composite score: (450,000∗1.8°C)+(2,100,000∗3.2°C)/ (450,000+2,100,000) = **2.95°C**	GHG weighting applied to produce a composite score: (450,000∗1.9°C)+(2,100,000∗3.2°C)/ (450,000+2,100,000) = **2.97°C**

Methodology I Step 3 Portfolio Protocol

1. **Definition of three weighting objectives & six principles**, including

   Support GHG disclosure by companies, allow portfolio alignment, standardisation of metrics, comparability, applicability, clarity etc.

2. **Assessment of four weighting approaches** against objectives & principles**:**

Option 1	Weighted average temperature score (WATS)
Option 2	Total emissions weighted temperature score (TETS)
Option 3	Market Owned emissions weighted temperature score (MOTS)
Option 4	Enterprise Owned emissions weighted temperature score (EOTS)
	Enterprise Value + Cash Owned emissions weighted temperature score (ECOTS)
	Total Assets emissions weighted temperature score (AOTS)

Methodology | Step 3 Portfolio Protocol

3. Calculation of scores for three sample portfolios

high, medium, low impact under each approach

4. Discussion of results

Recommended approach:

Enterprise owned emissions weighted temperature score (EOTS)

	WATS		TETS		MOTS		EOTS	
	Scope 1+2	Scope 1+2+3	Scope 1+2	Scope 1+2+3	Scope 1+2	Scope 1+2+3	Scope 1+2	Scope 1+2+3
High impact portfolio	2.76	3.05	2.94	3.13	3.07	3.17	3.00	3.18
Medium impact portfolio	2.20	2.94	2.06	3.01	1.95	3.09	1.96	3.09
Low impact portfolio	1.93	2.56	1.64	2.34	1.69	2.19	1.72	2.13

High impact portfolio

Company	CDP Activity	Portfolio weight	Investment value (€m)	Market owned emissions Scope 1+2 (tCO_2e)	Market owned emissions Scope 1+2+3 (tCO2e)	Enterprise owned emissions Scope 1+2 (tCO2e)	Enterprise owned emissions Scope 1+2+3 (tCO2e)	Temperature score Scope 1+2 (°C)	Temperature score Scope 1+2+3 (°C)	Scope 1+2 emissions (tCO_2e)	Scope 1+2+3 emissions (tCO_2e)
Air Liquide	Inorganic base chemicals	10%	1.00					1.85	3.20		
BHP	Iron ore mining	10%	1.00					3.20	3.20		
CEMEX	Cement	10%	1.00					2.80	3.20		
Daimler AG	Automobiles	10%	1.00					1.50	1.70		
Air France - KLM	Passenger airlines	10%	1.00					3.20	3.20		
Norsk Hydro	Aluminum	10%	1.00					3.20	3.20		
Royal Dutch Shell	Oil & gas refining	10%	1.00					3.20	3.20		
Tata Power Co	Coal generation	10%	1.00					3.20	3.20		
Voestalpine AG	Iron & steel	10%	1.00					2.80	3.20		
LG Chem Ltd	Other base chemicals	10%	1.00					2.60	3.20		
Totals		100%	10.00	58,085	132,565	11,169	92,327			276,339,338	1,996,689,772

Medium impact portfolio

Company	CDP Activity	Portfolio weight	Investment value (€m)	Market owned emissions Scope 1+2 (tCO_2e)	Market owned emissions Scope 1+2+3 (tCO2e)	Enterprise owned emissions Scope 1+2 (tCO2e)	Enterprise owned emissions Scope 1+2+3 (tCO2e)	Temperature score Scope 1+2 (°C)	Temperature score Scope 1+2+3 (°C)	Scope 1+2 emissions (tCO_2e)	Scope 1+2+3 emissions (tCO_2e)
3M Company	Specialty chemicals	10%	1.00					1.85	3.20		
ASML Holding	Electronic components	10%	1.00					3.20	3.20		
Bayer AG	Pharmaceuticals	10%	1.00					3.20	3.20		
Carrefour	Supermarkets, food & drugstores	10%	1.00					1.70	3.20		
Kone Oyj	Electrical equipment	10%	1.00					1.65	3.20		
LG Electronics	Household appliances	10%	1.00					1.60	3.20		
McDonalds Corporation	Fast food	10%	1.00					1.75	1.75		
OMRON Corporation	Industrial machinery	10%	1.00					1.80	3.20		
Saint-Gobain	Glass products	10%	1.00					2.00	2.00		
Atlas Copco	Industrial machinery	10%	1.00					3.20	3.20		
Totals		100%	10.00	1,120	16,280	637	9,898			25,271,661	284,071,011

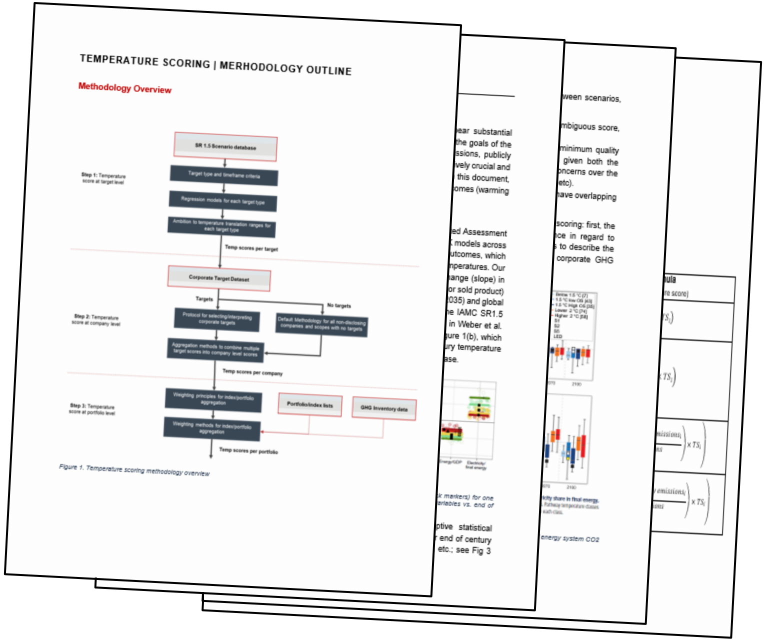
Low impact portfolio

Company	CDP Activity	Portfolio weight	Investment value (€m)	Market owned emissions Scope 1+2 (tCO_2e)	Market owned emissions Scope 1+2+3 (tCO2e)	Enterprise owned emissions Scope 1+2 (tCO2e)	Enterprise owned emissions Scope 1+2+3 (tCO2e)	Temperature score Scope 1+2 (°C)	Temperature score Scope 1+2+3 (°C)	Scope 1+2 emissions (tCO_2e)	Scope 1+2+3 emissions (tCO_2e)
Adobe, Inc.	Software	10%	1.00					1.70	2.00		
Burberry Group	Apparel & footwear	10%	1.00					1.50	1.80		
Asahi Group Holdings, Ltd	Alcoholic beverages	10%	1.00					1.85	1.85		
Kellogg Company	Baked goods & cereals	10%	1.00					1.65	1.95		
Celgene Corporation	Biotechnology	10%	1.00					3.20	3.20		
Microsoft Corp	Software	10%	1.00					1.50	2.00		
Vivend SA	Media	10%	1.00					3.20	3.20		
Danske Bank A/S	Banks	10%	1.00					1.60	3.20		
AXA Group	Insurance	10%	1.00					1.60	3.20		
Vodafone Group	Telecommunications services	10%	1.00					1.50	3.20		
Totals		100%	10.00	162	1,698	103	1,165			[illegible]	[illegible]

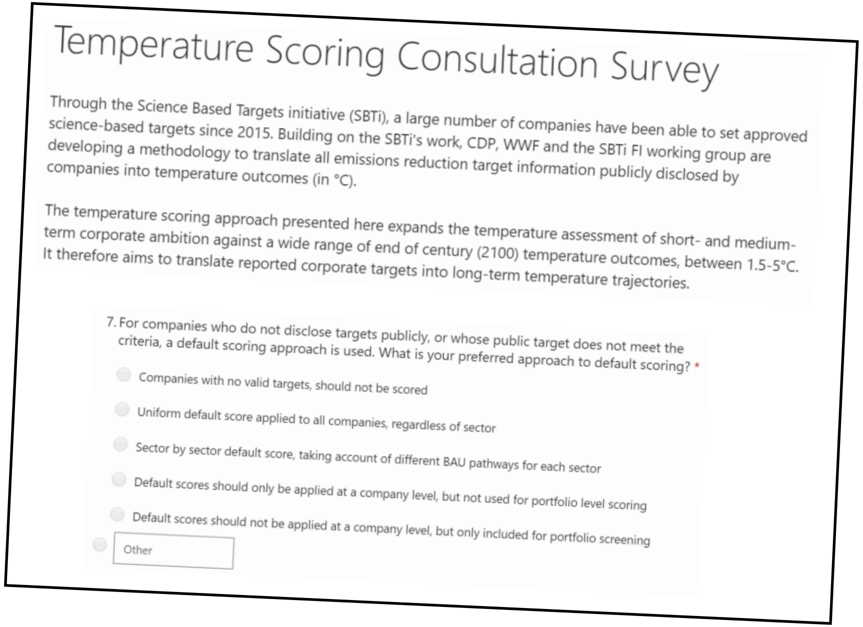
Consultation Process

Consultation | Documents for review

1. Methodology will be open for review and comment. Participants can review draft document



2. Online Survey: ask specific methodological questions e.g. default methodology, portfolio aggregation steps


Temperature Scoring Consultation Survey

Through the Science Based Targets initiative (SBTi), a large number of companies have been able to set approved science-based targets since 2015. Building on the SBTi's work, CDP, WWF and the SBTi FI working group are developing a methodology to translate all emissions reduction target information publicly disclosed by companies into temperature outcomes (in °C).

The temperature scoring approach presented here expands the temperature assessment of short- and medium-term corporate ambition against a wide range of end of century (2100) temperature outcomes, between 1.5-5°C. It therefore aims to translate reported corporate targets into long-term temperature trajectories.

7. For companies who do not disclose targets publicly, or whose public target does not meet the criteria, a default scoring approach is used. What is your preferred approach to default scoring? *

- Companies with no valid targets, should not be scored
- Uniform default score applied to all companies, regardless of sector
- Sector by sector default score, taking account of different BAU pathways for each sector
- Default scores should only be applied at a company level, but not used for portfolio level scoring
- Default scores should not be applied at a company level, but only included for portfolio screening
- Other

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Consultation I Survey Overview



Temperature Scoring Consultation Survey

This call for comments will allow all interested parties to review and express views on a new temperature scoring methodology being developed by CDP and WWF in collaboration with Science Based Targets initiative (SBTi). The methodology will be an open source framework to enable the translation of corporate GHG emission reduction targets into temperature scores at a company and a portfolio level.

The request for comment will remain open until May 22nd, 2020.

Through the Science Based Targets initiative (SBTi), a large number of companies have been able to set approved science-based targets since 2015. Building on the SBTi's work, CDP, WWF and the SBTi FI working group are developing a methodology to translate all emissions reduction target information publicly disclosed by companies into temperature outcomes (in °C).

The temperature scoring approach presented here expands the temperature assessment of short- and medium-term corporate ambition against a wide range of end of century (2100) temperature outcomes, between 1.5-5°C. It therefore aims to translate reported corporate targets into long-term temperature trajectories.

Assessing the ambition of corporate targets has traditionally been very complex, as targets can be expressed with different units, over multiple timeframes covering various types of scopes. The goal of a temperature rating is to translate targets into a single common and intuitive metric that is linked to the long-term temperature outcomes associated with the ambition of the target.

There remains some open questions and important methodological choices on which we would appreciate your feedback. To that effect, we'd appreciate your answer to this short survey that should take no more than 20 minutes of your time to complete.

The content received will be used to revise and update the methodology in anticipation of publication later this year. Any additional information to justify or support comments is also welcomed. All input received will be kept confidential and internal, unless consent is given by the respondent.

Thank you for your support.

Part 1: Introduction	General Information and familiarity with using targets and temperature scores to assess corporate ambition
Part 2: Target Protocol	Space for open comments on the approach to scenario selection and regression modelling. Seeking feedback on the default scoring approaches
Part 3: Company Protocol	Seeking feedback on the criteria for emissions coverage within scopes and timeframes used when generating temperature scores.
Part 4: Portfolio Protocol	Seeking feedback on the six weighting options presented, to understand which is the most relevant for temperature scoring.

Consultation I Key Questions

Target Protocol

1. General feedback on scenario approach and regression models
2. For companies who do not publicly disclose targets, we are seeking feedback on the approach to default scores
   Should a default score be applied?
   If yes, which level should it be applied at i.e. company and/or portfolio level
3. Feedback on the approach to defining the temperature score e.g. 3.2°c

Company Protocol

4. Which approach to scope coverage is most suitable for temperature scoring i.e. should the same strict thresholds of the SBTi be employed, or a weighting approach that limits the score to the coverage of emissions
5. Scores can be generated across 3 timeframes, short, mid, long-term. When it comes to using temperature scores, we are seeking feedback on which timeframes would be most relevant

Portfolio Protocol

6. Feedback on which of the six approaches to weighting temperature scores in a portfolio is most credible

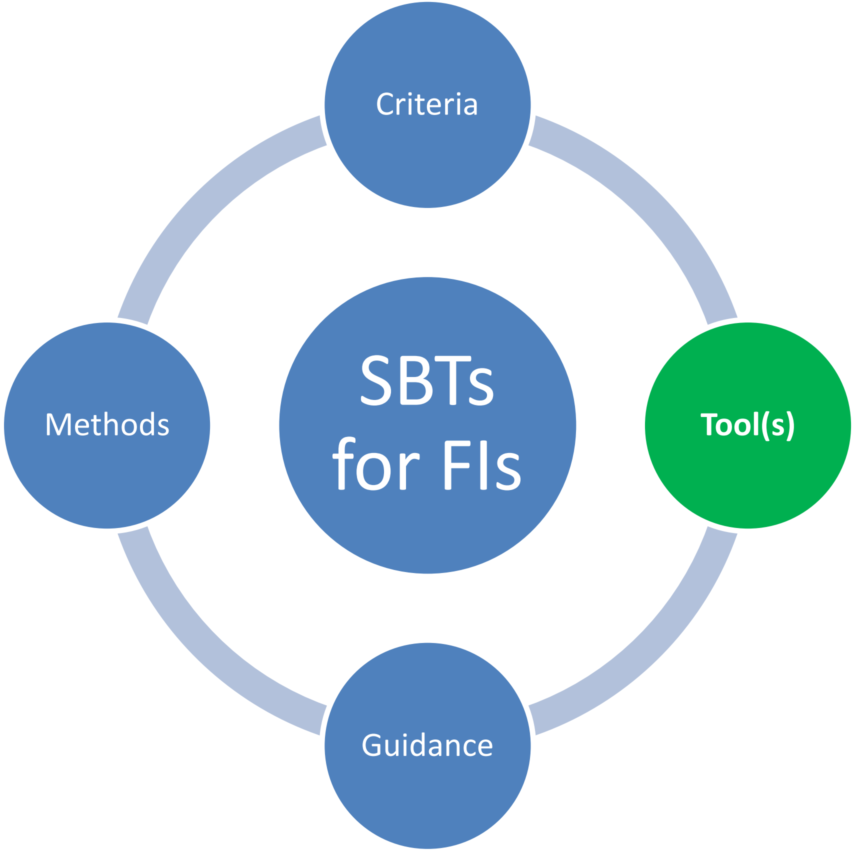
Consultation I Consultation timeline

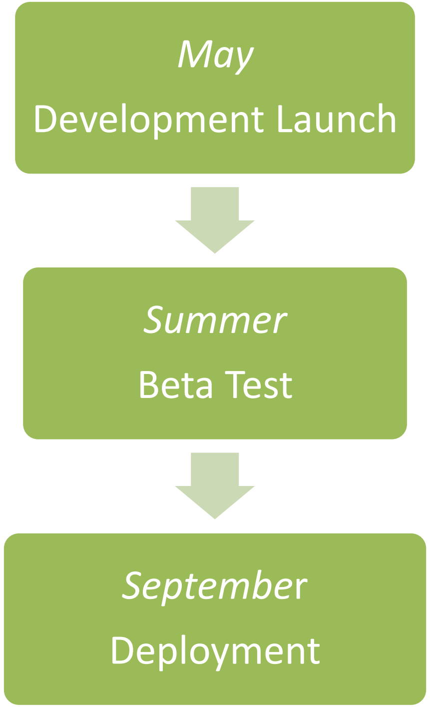
- The consultation period will open on April 30 and run until May 22.
- The content received will be used to revise and update the methodology in anticipation of publication later this year. Any additional information to justify or support comments is also welcomed.
- All input received will be kept confidential and internal



Next Steps for SBTi Finance Framework

Next Steps I Tool development process





Next Steps I Temperature alignment and portfolio coverage

Temperature Scoring Protocols

Open source

Translating targets to temperature scores & portfolio coverage

Developed by

- WWF
- CDP

Alignment Method & Target Setting Tool

Open Source

Enable investors to align portfolios to °C goal / portfolio coverage

Action companies

Developed by

- SBTi-Finance
- Technical consultants

Investor solutions

Commercial

Integrating data sources & workflow

ISS, Bloomberg, CDP, MSCI, etc...

Submit emission reduction target to SBTi for validation

EU Paris Agreement Alignment Disclosure Regulation

Next Steps | Temperature Alignment and Portfolio Coverage

Input

- ISS, Bloomberg, CDP, MSCI, etc…
- Company SBT & non-SBT emissions targets
  - Ambition
  - Timeframe
  - Scope
  - Coverage
  - Absolute & Intensity targets

Measure Alignment & Target Setting Tool

- Open Source Methodology & Code
- Convert company targets → Temperature Score
- Aggregate to portfolio, sector, market, …
- Measure alignment with Paris Agreement
- Set portfolio emissions reduction target
- Target companies for action
  - Engage / Divest / Portfolio shifting

Output & Engine Interaction

- Integrate tool output with existing infrastructure
  - CDP, ISS, Bloomberg, MSCI, Asset Managers prop., …
- Users:
  - ESG team
  - Risk Manager
  - CIO
  - Portfolio Manager
  - Analysts
  - Compliance
  - …
- External communication
- Submit target to SBTi for validation
- EU Paris Alignment Disclosure

Next Steps I Opportunities for participation

SBTi-Finance Framework	SBTi-Finance Temperature Alignment Method	SBTi-Finance Tool Development
• Stakeholder list • Criteria feedback • May 19 webinar • Guidance review • Commit to setting SBT • Submit target for review	• Review method • Complete survey	• Join working group • User developer • Data & service providers • Beta test tool • Integrate tool



Questions & discussion

SCIENCE BASED TARGETS

DRIVING AMBITIOUS CORPORATE CLIMATE ACTION

Thanks for your time!
If you haven't already, **join SBTi/FI stakeholder list** at https://sciencebasedtargets.org/financial-institutions/